

READING 19-4

Source: Columella (L.J.M.) *On Agriculture*, 3 volumes. 1941. Harvard University Press (H.B. Ash, E.S. Forster, Edward Heffner, translators).

Columella

Vineyard Management (III. p. 253–262)

III. Now, before discoursing on the planting of vines, I think it not out of place to lay down, as a sort of foundation for the coming discussion, the principle that we should have carefully weighed and investigated in advance whether viticulture will enrich the proprietor; for it is well-nigh purposeless as yet to give directions for planting vines, as long as the prior question is not yet affirmatively answered—whether vines should be kept at all. And most people would be doubtful on this point, to such an extent that many would avoid and dread such an ordering of their land, and would consider it preferable to own meadows and pastures, or woodland for cutting; for in the matter of ground planted with trees for the support of vines¹ there has been no little dispute even among authorities, Saserna being unfavourable to this kind of land, and Tremelius approving it most highly. But we shall make an appraisal of this opinion in its proper place. Meanwhile those devoted to the study of agriculture must be informed of one thing first of all—that the return from vineyards is a very rich one. And to pass over the old-time fertility of the land, of which Marcus Cato long ago, and Terentius Varro² more recently, recorded that each *iugerum*³ of vineyard yielded 600 *urnae*⁴ of wine—for Varro so declares most emphatically in the first book of his *Res Rusticae*—and that this was the customary yield not in one district alone but also in the country around Faventia⁵ and in the Ager Gallicus⁶, which is now annexed to Picenum; in our own times, at any rate, the neighbourhood of Nomentum is illumined by a most distinguished reputation; and especially that part owned by Seneca,⁷ a man of outstanding genius and erudition, on whose estates it is learned that every *iugerum* of vineyard has yielded commonly 8 *cullei*.⁸ For the things that happened in our Ceretanum⁹ seem to have been in the nature of a prodigy, in that a certain vine on your place exceeded the number of 2000 clusters, and with me, that 800 grafted stocks of less than 2 years¹⁰ yielded seven *cullei*, or that first-class vineyards produced a hundred amphorae¹¹ to the *iugerum*, when meadows, pastures, and wood land seem to do very well by the owner if they bring in a hundred *sesterces*¹² for every *iugerum*. For we can hardly recall a time when grain crops, throughout at least the greater part of Italy, returned a yield of four for one.¹³ Why, then, is viticulture in disrepute? Not, indeed, through its own fault, but because of human failings, says Graecinus; in the first place because no one takes pains in searching after cuttings, and for that reason people plant vineyards of the worst sort; and then they do not nourish their vines, once planted, in such a way as to let them gain strength and shoot out before they wither; and if they do happen to grow, they are careless in the matter of cultivation. Even at the very start they think that it makes no difference what kind of ground they plant; or

1 I.e. the *arbustum*.

2 Varro, R.R. I. 2. 7, quoting Cato, *Origines*.

3 One *iugerum* = about 3/5 of an acre.

4 1 *urna* = 1/2 *amphora* = about 3.42 U.S. gallons.

5 Mod. Faenza.

6 A strip of land running along the Adriatic coast of Italy.

7 Lucius Annaeus Seneca, the philosopher.

8 1 *culleus* = 20 *amphorae* = about 137 U.S. gallons.

9 See *Introd.*, p. XI.

10 Perhaps the two *iugera* of grafted vines mentioned in III. 9. 6. For the varying number of vines planted to the *iugerum*, see V. 3.

11 1 *amphora* = about 6.84 U.S. gallons.

12 1 *sestertius* = about 4 cents.

13 Varro, in the preceding century, speaks of grain yields of 10 for 1 in some parts of Italy, of 15 for 1 at some places in Etruria, and of reported yields of a hundredfold around Sybaris in Italy and at certain places in Syria and Africa.

rather they pick out the very worst section of their lands, as though such ground alone were particularly fit for this plant because incapable of producing anything else. Either they do not understand even the method of setting them or else they fail to put it into practice when they do understand it. Then too, they seldom have the dowry¹⁴ that is, the equipment—in readiness for their vineyards; though this, if neglected, uses up many days of toil and puts a constant drain on the coffers of the proprietor. Most people, in fact, strive for the richest possible yield at the earliest moment; they make no provision for the time to come, but, as if living merely from day to day, they put such demands upon their vines and load them so heavily with young shoots as to show no regard for succeeding generations. After committing all these acts, or at any rate most of them, they would rather do anything at all than admit their own guilt; and they complain that their vineyards do not yield them a return—vineyards which they themselves have ruined through greed, or ignorance, or neglect. But if any who combine painstaking care with scientific knowledge receive, not forty, or at least thirty according to my reckoning, but, as Graecinus says, though setting the lowest estimate, twenty *amphorae* from every *iugerum*, they will easily outdo in the increase of their ancestral estates all those who hold fast to their hay and pot-herbs. And he is not mistaken in this; for, like a careful accountant, he sees, when his calculations are made, that this kind of husbandry is of the greatest advantage to his estate. For, admitting that vineyards demand a very generous outlay, still seven *iugera* require the labour of not more than one vinedresser, upon whom people in general set a low value, thinking that even some malefactor may be acquired from the auction-block;¹⁵ but I, disagreeing with the opinion of the majority, consider a high-priced vinedresser of first importance. And supposing his purchase price to be 6000 or, better, 8000 *sesterces*, when I estimate the seven *iugera* of ground as acquired for just as many thousands of *sesterces*,¹⁶ and that the vineyards with their dowry—that is, with stakes and withes—are set out for 2000 *sesterces* per *iugerum*, still the total cost, reckoned to the last farthing, amounts to 29,000 *sesterces*. Added to this is interest at six per cent. per annum, amounting to 3480 *sesterces* for the two-year period when the vineyards, in their infancy as it were, are delayed in bearing. The sum total of principal and interest comes to 32,480 *sesterces*. And if the husbandman would enter this amount as a debt against his vineyards just as a moneylender does with a debtor, so that the owner may realize the aforementioned six per cent. interest on that total as a perpetual annuity, he should take in 1950 *sesterces* every year. By this reckoning the return from seven *iugera*, even according to the estimate of Graecinus, exceeds the interest on 32,480 *sesterces*. For, assuming that the vineyards are of the very worst sort, still, if taken care of, they will yield certainly one *culleus* of wine to the *iugerum*; and even though every forty urns are sold for 300 *sesterces*, which is the lowest market price, nevertheless seven *cullei* make a total of 2100 *sesterces*—a sum far in excess of the interest at six per cent. And these figures, as we have given them, take account of the calculations of Graecinus. But our own opinion is that vineyards which yield less than three *cullei* to the *iugerum* should be rooted out. And, even so, we have made our calculations up to this point as if there were no quicksets¹⁷ to be taken from the trenched ground; though this item alone, at a favourable price, would clear the entire cost of the land, if only the land belongs, not to the provinces, but to Italy. And no one should be skeptical of this statement when he distinguishes between my method and that of Julius Atticus; for I am now planting between the rows 20,000 mallet-shoots¹⁸ to every *iugerum* of vineyard, while he sets out four thousand fewer.¹⁹ Assuming that his way is the better one, still no ground, even the most unfavourable, will fail to yield a return exceeding the expense incurred; since, even though 6000 of the plants die through the carelessness of the vinedresser, still the remaining 10,000 will be purchased by contract-vineyardists, cheerfully and at a profit, for 3000 *sesterces*. This sum exceeds by one third the 2000 *sesterces* which we have

14 An expression borrowed from the marriage custom of providing a portion for the bride; for the vine was proverbially “wedded” to its supporting tree.

15 Lit. the stone, or stone platform, at which slave auctions were held.

16 I.e. 7000.

17 Rooted cuttings.

18 See Chap. 6, sec. 3, below.

19 Cf. Chap. 16, sec. 3, below.

named above as the cost of planting one *iugerum* of vines, and yet our own management has now progressed to the point where husbandmen are not averse to purchasing quicksets from me at a price of 600 *sesterces* a thousand. But anyone else will hardly go beyond the above-named figure; for no one will readily take our word for it that there is such a quantity of wine upon our small pieces of ground as you, Silvinus, know to be the case. For that reason I have quoted the average and customary price of quicksets, so that those who, through want of knowledge, avoid this branch of husbandry, may be brought over more quickly to my opinion with no dissenting vote. Therefore either the revenue from ground prepared for planting or the hope of vintages to come should encourage us in the planting of vines. And now that we have shown that it is consistent with good business to plant them, we shall offer directions for putting them in order.

IV. One who has it at heart to make plantations of vines should guard especially against the willingness to entrust them to another's care in preference to his own; and he should not buy quicksets. But he should plant at home shoots of the sort most approved, and should make a nursery of vines from which he may clothe his land with vineyards. For foreign cuttings, transplanted from a different locality, are less at home in our soil than are the native varieties, and for that reason, being strangers, so to speak, they dread a change of climate and situation; and also they offer no definite assurance of quality, seeing that it is uncertain whether the one who has planted them has set out shoots of a carefully tested and approved variety. Therefore a period of 2 years must be considered the minimum time within which the quality of the cuttings can certainly show itself; though, as I have said, it has always been of the greatest importance to set out stock of carefully selected origin. Next after this he should remember to make a careful choice of a site for his vineyards; and when he has come to a decision on this point he should know that the greatest pains must be employed in trenching the ground. After he has finished the trenching he should use no less care in the planting of the vine, and after the planting he should attend with greatest diligence to the matter of cultivation; for this is, so to speak, the chief and crowning point of the investment, since on it rests the decision as to whether it has been better or worse for the proprietor to commit his money to the soil rather than to employ it in idleness. Therefore I shall discuss in their proper order each of those matters which I have proposed.

How to Make Vines Yield Plentifully by Grafting (On Trees. p. 369)

VIII. When you wish to engraft a vine, cut off fruit-bearing shoots of the best quality from a mother-vine at the time when they begin to put forth "eyes" and when the wind is in the south. A shoot which you are using as a graft should be taken from the top of the vine and be round with a large number of good knots in it. Then leave the 3 soundest knots and below the third "eye" pare away a space of 2 inches with a very fine knife on both sides without damaging the pith so as to form a wedge. Then make a cut in the vine which you are going to engraft and smooth off the wound, and then make clefts and insert in them the shoots which you have got ready up to the point at which they have been pared down, in such a way that the bark of the slip meets the bark of the vine evenly all round. Any graft which you have put in, you should carefully bind with a withy or the bark of an elm, and you should smear the cut with well-kneaded clay mixed with chaff and bind it, so that neither water nor wind can penetrate into it; then put moss outside the clay and bind it round. This provides moisture and does not allow it to dry up. Below the insertion and the binding make a slight wound with a sharp pruning-knife on both sides of the vine, so that the moisture may flow out from these cuts rather than overflow from the actual graft; for too much moisture is harmful and does not allow the slips which have been engrafted to take hold. Some of the ancients think that a hole ought to be bored in the vine and then the slips put in after being smoothly pared away; but we have carried out the same process by a better method. For the old-fashioned auger creates sawdust and therefore burns the part which it perforates and, being burnt, it rarely ever takes hold of the slips which are inserted. We, on the other hand, have adapted what we call the Gaulish auger for this kind of grafting. This makes a hollow without causing burning, because it produces shavings instead of saw-dust. So when we have cleaned out the hole which has been bored, we insert the slips after they have been pared on every side and then daub them round. This kind of graft thrives very readily. You should, then, have the grafting of your vines completed about the equinox. Engraft moist places from a white grape, dry places from a black.